CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being is being filed with the U.S. Patent and Trademark Office via the Office electronic filing system on June 25, 2010.

By: _____
Name: Karen L. Lum

PATENT
PD-201006A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In Re Application of: Donald C. D. Chang		Examiner: Marcos L. Torres
Serial No.	09/858,387	Group Art Unit: 2683
Filed:	May 15, 2001	Confirmation No.: 3432
For:	COMMUNICATION SYSTEM FOR MOBILE USERS USING ADAPTIVE ANTENNAS	

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Sir:

In response to the Examiner's Answer dated April 27, 2010, please enter the following remarks.

REMARKS

Appellants respectfully request the Board to reverse the Examiner's rejection in view of the Appeal Brief and the remarks set forth below.

Claim 1

On pages 10 and 11 of the Examiner's Answer, the Examiner states that the definition of the field of view not only introduces limitations from the specification to the claims which would be improper, but also introduces limitations that are not found in the specification. Appellants respectfully submit that the field of view for the plurality of panels is clearly illustrated in Fig. 2A. Paragraph 71 describes that the field of view of the element of each panel share the same field of view. Appellants respectfully submit that it is clear from the illustration of Fig. 2A that each of the panels has different fields of view. Therefore, Appellants respectfully request the Board to consider the limitation of the field of view as described in claim 1.

On page 11, the Examiner states that the Appellants are forming a piece-meal analysis by stating that the gross reference fails to disclose controlling beams and multiple panels of an adaptive panel and that the Katz reference does not teach a system that controls beam directions of a plurality of adaptive panels to track ground mobile users from a gateway station.

It is clear from the Gross reference that tracking a user is provided. The Katz reference clearly describes an antenna array that has a plurality of beam directions b_1-b_8. The directions are described in column 7, lines 1-22 of the Katz reference. It is clear from the Katz reference that multiple antenna arrays may be used. However, the antenna arrays do not have communication beams that move with the mobile terminals.

It should be noted that claim 1 also includes a gateway station that has a plurality of commands for each of the plurality of panels. Although the Gross reference teaches that commands may be formed on the ground, there is no teaching or suggestion that the commands are used to control the beams to move with the mobile terminals.

In the paragraph bridging pages 11 and 12 of the Examiner's Answer, the Examiner disagrees with the Appellants' assertion that the combination of the Gross and Katz references is improper. The Examiner points to column 2, lines 56-57 which states that the Gross reference can be an airborne or a satellite cellular system. While it is true that the Gross reference may be applied in such a manner, there is no teaching or suggestion for providing a plurality of panels that have different fields of view in the Gross reference. Combining the references would lead to an airborne device that would include a plurality of panels on an airborne device but the panels would have fixed beam directions as stated in the Katz reference. The Gross reference merely teaches that each of the satellites has the same field of view. While the Katz reference has different sectors, there is no teaching that the panels in Katz are used for tracking. Thus, the combination of references does not teach a plurality of panels that have different fields of view that are used for tracking different users within the field of view. Although coordination of the communication with the mobile devices around the base stations is not claimed, there must be some coordination in communication between the various panels when mobile terminals move into different fields of view. Therefore, the simple combination of the Gross reference and the Katz reference fails to take into account the complexity of the matter. Appellants, therefore, respectfully request the Board to reverse the Examiner's rejection of claim 1.

Claim 3

With respect to claim 3, the Examiner cites Newton's Telecom Dictionary for defining a phased array antenna. While it is true that a phased array antenna has two or more active elements, there is no teaching or suggestion in the Examiner's definition that auxiliary elements are present for cancelling interference between the plurality of dynamic communication beams. The definition provided by the Examiner illustrates a basic phased array antenna but does not include auxiliary elements that are used for cancelling interference. Therefore, Appellants respectfully request the Board to reconsider the rejection of claim 3 as well.

Claim 4

Claim 4 depends from claim 3 and recites that the auxiliary elements are weighted to provide interference cancelling. The basic definition provided for above using Newton's Telecom Dictionary does not teach weighting elements to provide interference cancelling. It should be noted that the auxiliary elements referred to in claim 3 are additional elements than the original set of elements. While it is true that adding and subtracting of beams is provided in different directions in a phased array antenna, there is no teaching for additional elements that are used for cancelling interference. Appellants, therefore, respectfully request the Board to reconsider the rejection of claim 4.

Claim 7

With respect to claim 7, the Examiner, on page 13 of the Examiner's Answer, points to column 2, lines 55-61 of the Gross reference for teaching a stratospheric platform. Column 2 merely states an airborne cellular system but does not teach a stratospheric platform. Appellants respectfully request the Board to reconsider the rejection of claim 7.

Claim 9

In the paragraphs bridging pages 13 and 14, again, the Katz reference does not teach or suggest that the array elements are modular. Appellants, therefore, respectfully request the Board to reverse the Examiner's position of claim 9.

Claim 10

The Examiner again cites Newton's Telecom Dictionary for defining a bus. Appellants respectfully submit that a bus is a separate component rather than merely an electrical connection as the Examiner suggests. Therefore, because the Gross reference does not teach a separate element or device for coupling two components, Appellants respectfully submit that a bus is not taught or suggested.

Claim 11

Claim 11 depends from claim 10 and recites that a bus is coupled to the controller. That is, the bus of claim 10 is used for connecting a plurality of modules that have the main array elements therein. Claim 11 is believed to be allowable since no bus is taught or suggested in claim 10.

Claim 20

On page 15 of the Examiner's Answer, the Examiner states that "As indicated by the appellant, the cited section of col. 9 discloses a handover between BTS". There is no teaching for a gateway station that communicates control signals to base stations to form dynamic links so that a user receives at least a first link from a first base station and a second link from a second base station. Appellants respectfully request the Board to reverse the Examiner's position with respect to claim 20 as well.

Claim 21

Claim 21 refers to generating more than one dynamic link simultaneously from one panel that moves with the mobile terminals. Although the Katz reference describes more than one beam, the beams do not move with the terminal. The Gross reference does describe more than one beam. The beam does not appear to be generated from a plurality of panels. Appellants, therefore, respectfully request the Board to reverse the Examiner's position with respect to claim 21.

Claim 22

Claim 22 is believed to be allowable for at least the same reasons set forth above, since claim 22 recites cancelling interference between multiple dynamic links. Appellants, therefore, respectfully request the Board to reverse the Examiner's position with respect to claim 22 as well.

Claim 13

Claim 13 recites "a limiter coupled within the feedback path." The Examiner does not agree with the Appellants and states that the Kasperovitz reference teaches a limiter allay. The Examiner states that "according to the claim the coupling and not necessary the limiter is the one that have to be within the feedback path and Kasperovitz clearly shows a limiter coupled within the feedback path." Despite this confusing argument, Appellants respectfully submit that the Kasperovitz reference does not have a limiter within the feedback path which is required by claim 13. Appellants, therefore, respectfully request the Board to reverse the Examiner's position with respect to claim 13.

Claim 15

Claim 15 depends from claim 14 and teaches that the nulling processor comprises an element code dispread and a user code dispread. Although dispreading is mentioned in the Agee reference, there is no teaching in the reference for element code dispread and user dispread as set forth in claim 15. The Examiner again points to column 23, lines 7-29 and column 11, lines 33-48 of the Agee reference for this teaching. The column 23 reference merely states a linear combiner dispreading weight W_k employed over each frequency cell during signal reception. Both element code dispreading and user code dispreading are thus not taught. With respect to the column 11 reference, column 11 recites, "dispreading weights are adapted to maximize the signal-to-interference-and-noise ratio of the dispread message sequence in the preferred embodiment." However, there is no teaching for both element code dispreading and user code dispreading. Appellants, therefore, respectfully request the Board to reverse the Examiner's position with respect to claim 25 as well.

Claim 16

The Appellants adopt the arguments presented for claim 13.

Claim 17

The Appellants adopt the arguments presented for claim 15.

Claim 19

The Appellants adopt the arguments presented for claim 15 for this claim as well.

Claim 18

The Examiner's arguments for claim 18 appear to be the same for claim 1. Appellants respectfully request the Board to reconsider the rejection of claim 18 for the arguments provided above with respect to claim 1, both in the Reply Brief and the Appeal Brief.

CONCLUSION

Appellants respectfully request the Board to reverse the Examiner's position with respect to each and every claim of the present application in view of the above remarks and the Appeal Brief. Appellants thank the Board for their consideration. Should the Board have any questions regarding this matter, the Board is directed to contact the undersigned directly.

Respectfully submitted,

Dated: June 25, 2010

Todd N. Snyder, Registration No. 41,320
Attorney for Appellants

The DIRECTV Group, Inc.
CA / LA1 / A109
2230 East Imperial Highway
El Segundo, CA 90245

Telephone: (310) 964-0560